



Patent 8681RCR2

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## Application of

Applicant(s) : Mitchell, et al.

Serial No.

: 10/705,174

Filed

: November 11, 2003

Title

: WATER FILTER MATERIALS, WATER FILTERS AND KITS

CONTAINING PARTICLES COATED WITH CATIONIC POLYMER AND

PROCESSES FOR USING THE SAME

Docket

: 8681RCR2

Art Unit

: 1723

Confirm. No.: 4650

MAIL STOP AMENDMENT Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF MAILING

1 hereby certify that this correspondence is being deposited with the United States Postal

Reg. No. 46,404

## INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§ 1.56, 1.97, AND 1.98

Applicant submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 CFR §1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56(a). While the information referred to in this Information Disclosure Statement may be material pursuant to 37 CFR §1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 CFR §1.97(h), constitute an admission that any patent, publication, or other information referred to is, or is considered to be, material to the patentability of this invention. No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103, and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish otherwise. Further, pursuant to 37 CFR §1.97(g), the filing of this

Serial No. 10/705,174 Docket 8681RCR2

Statement should not be construed as a statement that a search has been made or that no other material information exists.

This Information Disclosure Statement is being filed within the period set forth in 37 CFR §1.97(b) because it is believed to be filed before the mailing date of a first office action on the merits.

The above application is a continuation-in-part of U.S. Application Serial Nos. 10/464,209 and 10/464,210 both filed on June 18, 2003. Pursuant to §1.98(d), copies of those items cited by or submitted to the Office in the prior applications are not being submitted.

The Office has waived the requirement pursuant to 37 CFR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003. Therefore, no copies of each cited U.S. patent and each cited U.S. patent application publication are enclosed, but the cited U.S. patents and the cited U.S. patent application publications are listed on PTO/SB/08A.

Respectfully submitted,

DINSMORE & SHOHL LLP

By

Paul M. Ulrich

Registration No. 46,404

One Dayton Centre
One South Main Street, Suite 1300
Dayton, Ohio 45402-2023
Telephone: (937) 223-2050

Facsimile: (937) 223-0724

PMU/kec Encl

PTO/SB/08A (07-05)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE ion Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Complete if Known

## **INFORMATION DISCLOSURE**

STATEMENT BY APPLICANT (Use as many sheets as necessary)

Sheet

**Application Number** 10/705,174 Filing Date November 11, 2003 First Named Inventor Mitchell, et al. Art Unit 1723 Examiner Name Yoon-Young Kim Attorney Docket Number 8681RCR2

Examiner Initials*	Cite No.1	Document Number	U. S. PATENT Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
mitiais"	NO.	Number-Kind Code <sup>2 (if known)</sup>	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
		US-5,521,008	05/28/1996	Lieberman et al.		
		US-6,827,854	12/07/2004	Mitchell et al.		
		US-6,241,893	06/05/2001	Levy		
		US-5,772,896	06/30/1998	Denkewicz et al.		
		US-4,396,512	08/02/1983	Beauman et al.		
		US-6,630,016	10/07/2003	Koslow, Evan E.		
		US-5,376,279	12/27/1994	Judd et al.		
		US-4,654,075	03/31/1987	Cipollini, Ned E.		
		US-5,527,451	06/18/1996	Hembree et al.		
		US-5,536,394	07/16/1996	Lund et al.		
		US-5,709,794	01/20/1998	Emmons et al.		
		US-5,882,507	03/16/1999	Tanner et al.		
		US-6,103,114	08/15/2000	Tanner et al.		
		US-4,969,996	11/13/1990	Hankammer		
		US-5,431,813	07/11/1995	Daniels		
		US-6,214,224	04/10/2001	Farley		
		US-5,957,034	09/28/1999	Sham et al.		
		US-6,145,670	11/14/2000	Risser		
		US-6,120,685	09/19/2000	Carlson et al.		
		US-6,241,899	06/05/2001	Ramos		
		US-5,834,114	11/10/1998	Economy et al.		
		US-5,776,385	07/07/1998	Gadkaree et al.		
		US-5,487,917	01/30/1996	Gadkaree		
		US-5,702,498	12/30/1997	Huang		
		US-4,448,695	05/15/1984	Gordon, Jr. et al.		
		US-5,773,143	06/30/1998	Vermillion et al.		
		US-4,283,283	08/11/1981	Zimmerman		
		US-4,552,863	11/12/1985	Fujimori		
		US-3,950,267	04/13/1976	Arakawa et al.		
		US-6,057,262	05/02/2000	Derbyshire et al.		
		US-5,204,310	04/20/1993	Tolles et al.		
		US-5,670,124	09/23/1997	Itoga et al.		
		US-4,081,370	03/28/1978	Schmitt, Jr. et al.		
		US-5,466,378		Dussert et al.		
		US-4,822,765		Nishimura		
		US-4,670,482		Dilling		
		US-6,565,749		Hou et al.		
		US-2002/0148785	10/17/2002	Mitchell et al.		
		US-2002/0150686	10/17/2002	Mitchell et al.		
		US-2002/0074294	06/20/2002	Tremblay et al.		
		US-4,978,650	12/18/1990	Coughlin et al.		

8681RCR2

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Use as many sheets as necessary)

Complete if Known

Application Number 10/705,174

Filing Date November 11, 2003

First Named Inventor Mitchell, et al.

Art Unit 1723

Examiner Name Yoon-Young Kim

Sheet

Attorney Docket Number

Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
Initials*	No.¹	Number-Kind Code <sup>2 (# known)</sup>	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
		US-6,660,168	12/09/2003	Tremblay et al.		
-		US-6,565,749	05/20/2003	Hou et al.		
		US-2003/0038084	02/27/2003	Mitchell et al.		
		US-2003/0096703	04/22/2003	Mitchell et al.		
		US-2003/0106851	06/12/2003	Tremblay et al.		
		US-2003/0136728	07/24/2003	Jagtoyen et al.		
		US-2004/0040906	03/04/2004	Jagtoyen et al.		
		US-2002/0172637	11/21/2002	Chesneau et al.		
		US-S/N 09/574,456	05/19/2000	Tremblay et al.		

CODEICH DATENT DOCUMENTS

		FORE	IGN PATENT DOC	UMENTS			
Examiner Initials*	Cite No.1	Foreign Patent Document  Country Code <sup>3</sup> "Number <sup>4</sup> " Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY		Patentee or Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		RU 2 064 429	07/27/1996	Vasil'evich	et al		<u> </u>
		RU 2 034 789	05/10/1995	Aleksandro	vich		
		RU 2 070 438	12/20/1996	Pimenov et	al		
		EP 1 419 109	12/21/2005	Mitchell et a	al		
		WO 94/10091	03/11/1994	Bio Sci Pro	d Ent.		
		WO 99/10076	03/04/1999	Hughes			
		WO 02/098536	12/12/2002	Mitchell et a	al.		
		WO 02/083266	10/24/2002	Mitchell et a	al.	·	
		EP 367389	05/09/1990	Dilling et al.			
		FR 2331 515	06/10/1977	Seiler et al.			
		FR 2743 285	07/11/1997	Moulinex			
		GB 1,163,426	09/04/1969	Kata Mfg. a	nd Filtering		
		JP 2000281445	10/10/2000	Tokio et al.			
		JP 05049921	03/02/1993	Tokai Carbo	on KK		
		SU 1717538	03/07/1992	Pokonova e	et al.		
		DE 93 12 279	10/14/1993	ETC Engine	eering		
		WO 02/100509	12/19/2002	Cannon et a	al		
		WO 02/068324	09/06/2002	Cannon et a			
		WO 03/068686	08/21/2003	Mitchell et a	al.		
		EP 0 490 317	06/17/1992	Abe et al.			
Examiner Signature					Date Considered		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitut	e for form 1449/PTO			Complete if Known			
				Application Number	10/705,174		
INFO	DRMATIO	N DIS	CLOSURE	Filing Date	November 11, 2003		
STATEMENT BY APPLICANT				First Named Inventor	Mitchell et al.		
	(Use as many si	haate se n	neasean)	Art Unit	1723		
	lose as many si	16613 83 11	ecessary)	Examiner Name	Yoon Young Kim		
Sheet	3	of	3	Attorney Docket Number	8681RCR2		

_					
		NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), ti			
		DIMITRIS IOANNIS COLLIAS, Declaration under 37 CFR §1.132, 04/01/2004.			
, , ,		NEWCOMBE, G., ET AL., "Granular activated Carbon: importance of surface properties in the adsorption of naturally occurring organics", Colloids and Surfaces A:  Physiochemical and Engineering Aspects, 1993, 65-71, Vol. 78.			
		GREGG, S.J., ET AL., "Mesoporous solids: the Type IV isotherm", <u>Adsorption, Surface Area and Porosity</u> , 1982, 137-143, 2nd Edition, Academic Press, Inc.			
		REPORT OF TASK FORCE, "Guide Standard and Protocol for Testing Microbiological Water Purifiers", <u>United States Environmental Protection Agency</u> , (submitted April, 1986), revised April, 1987, 1-39.			
		WESTVACO PRODUCTS ON-LINE, "Wood-based Activated Carbons", (2 pgs), downloaded 7/01.			
		ABOTSI, GODRIED, "Interfacial Properties of Coal: A Guide to Catalyst Loading and Dispersion for Coal Conversion", Energia, Vol. 7, No. 5, 3-5, (1996)			
		MORENO-CASTILLA, C., ET AL., "The Creation of Acid Carbon Surfaces by Treatment with (NH <sub>4</sub> ) <sub>2</sub> S <sub>2</sub> O <sub>8</sub> ", <u>Carbon</u> , Vol. 35, No. 10-11, 1619-1626 (1997).			
		FRANZ, M., ET AL., "Effect of Chemical Surface Heterogeneity on the Adsorption Mechanism of Dissolved Aromatics on Activated Carbon", Carbon, Vol. 28, No. 13, 1807-1819, (2000).			
		BABIC, B.M., ET AL., "Point of Zero Charge and Intrinsic Equilibrium Constants of Activated Carbon Cloth", <u>Carbon</u> , Vol. 37, No. 3, 477-481, (February 22, 1999).	-		
		MENENDEZ, J.A., ET AL., "On the Difference Between the Isoelectric Point and the Point of Zero Charge of Carbons", <u>Carbon</u> , Vol. 33, No. 11, 1655-1657, (1995).			

Examiner	· <del></del>	Date	
Signature		Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.